AMENDMENT OF SOLICIT	ATION/MODIF	ICATION OF CONTRACT		1. CONTRACT ID	CODE	PAGE OF PAGE
2. AMENDMENT/MODIFICATION NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.		- :	5. PROJECT	NO.(If applicable)
0005	24-Jun-2004	W81G66-3261-0518				
6. ISSUED BY CODE	W912P6	7. ADMINISTERED BY (If other than item 6)		CODE	3	
U. S. ARMY ENGINEER DISTRICT, CHICAGO 111 CANAL STREET CHICAGO IL 60606		See Item 6				
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, Stat	te and Zip Code)		9A. AMENDMEN W912P6-04-R-0		LICITATION NO
				9B. DATED (SEE 10-May-2004	ITEM 11)	1
				10A. MOD. OF C	ONTRAC	Γ/ORDER NO.
				10B. DATED (SE	EE ITEM 1	3)
CODE	FACILITY COD	E	ITAT	CIONE		
X The above numbered solicitation is amended as set forth i			=	is extended,	is not exter	ndad
Offer must acknowledge receipt of this amendment prior (a) By completing Items 8 and 15, and returning or (c) By separate letter or telegram which includes a refe RECEIVED AT THE PLACE DESIGNATED FOR THE REJECTION OF YOUR OFFER. If by virtue of this am- provided each telegram or letter makes reference to the se	copies of the amendment rence to the solicitation and a RECEIPT OF OFFERS PRICE endment you desire to change	t; (b) By acknowledging receipt of this amendment of mendment numbers. FAILURE OF YOUR ACKNO OR TO THE HOUR AND DATE SPECIFIED MAY an offer already submitted, such change may be may	on each	h copy of the offer sub EDGMENT TO BE EULT IN telegram or letter,	mitted;	
12. ACCOUNTING AND APPROPRIATION DATE	ΓA (If required)					
		O MODIFICATIONS OF CONTRACTS/O				
A. THIS CHANGE ORDER IS ISSUED PURSU CONTRACT ORDER NO. IN ITEM 10A.		CT/ORDER NO. AS DESCRIBED IN ITE hority) THE CHANGES SET FORTH IN			IN THE	
B. THE ABOVE NUMBERED CONTRACT/O office, appropriation date, etc.) SET FORTH					nges in pay	ying
C. THIS SUPPLEMENTAL AGREEMENT IS	ENTERED INTO PURS	UANT TO AUTHORITY OF:				
D. OTHER (Specify type of modification and au	thority)					
E. IMPORTANT: Contractor is not,	is required to sign	n this document and return	cop	ies to the issuing o	ffice.	
 DESCRIPTION OF AMENDMENT/MODIFIC where feasible.) Reference Solicitation No. W912P6-04-R-000 				ontract subject matt	ter	
The Proposal Due Date is extended from 24	June 2004 at 4:30 PM,	Chicago Local Time to 1 July 2004 at	4:30	PM, Chicago Lo	cal Time.	
Continued on next page.						
Except as provided herein, all terms and conditions of the docu	ment referenced in Item 9A o	r 10A, as heretofore changed, remains unchanged an	ıd in f	ull force and effect		
15A. NAME AND TITLE OF SIGNER (Type or pr		16A. NAME AND TITLE OF CON			(Type or p	orint)
× VI · · · I		TEL:		EMAIL:		· ·
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED		CA	*	16	C. DATE SIGNE
		BY				4-Jun-2004
(Signature of person authorized to sign)	-	(Signature of Contracting Office	cer)		^	+-Juli-2004

30-105-04

EXCEPTION TO SF 30 APPROVED BY OIRM 11-84 STANDARD FORM 30 (Rev. 10-83) Prescribed by GSA FAR (48 CFR) 53.243

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

The following items are applicable to this Amendment:

A. CHANGES TO SPECIFICATIONS

Attached hereto are the following revised pages to the Solicitation's Specifications. Revised pages will replace like-numbered pages in the subject Specifications. Changes are indicated by an asterisk in the left margin opposite the beginning of the revision and an asterisk in the right margin opposite the end. The revision is marked with "(Am-0005)" and is shown on each page of the revised specification sections.

Section	Page No(s)/Paragraph No(s)
00010	Page 11 of 76/ Line Item 0026
00010	Page 13 of 76/ Line Item 0031
01100	01100-5/ Para. c
01270	01270-8/ Para. 1.3.17.1
01270	01270-8/ Para. 1.3.17.2
01270	01270-11/ Para. 1.3.31.1
02890	02890-8/ Para. 2.5.4.3
02890	02890-8/ Para. 2.5.5
02921	02921-5/ Para. 2.1.2
02921	02921-5/ Para. 2.1.3
02921	02921-9/ Para. 3.1.1
02921	02921-13/ Para. 3.3.4
02930	02930-20/ Para. 3.6

B. NEW PAGES/PARAGRAPHS

Attached hereto are the NEW pages to specification sections. Each new specification page is marked with "(Am-0005)."

Section	Page No(s)
00320, Appendix A	3-1 to 3-17

C. CHANGES TO DRAWINGS

Revised Drawings: The drawings listed below replace like-numbered drawings and are issued herewith. Remove the old drawings and replace with the new drawings.

Drawing No.	Sheet No.	Revision Date
DCREKG02.CAL	G-02	6/21/04
DCREKC20.CAL	C-20	6/21/04
DCREKC25.CAL	C-25	6/21/04
DCREKC26.CAL	C-26	6/21/04

D. CHANGES TO SECTION 00100, BIDDING SCHEDULE/INSTRUCTIONS TO BIDDERS

PROCEDURES FOR SUBMITTAL OF OFFERS:

1. Delete the text contained in Paragraph 3.1 in its entirety and replace it with the following text:

3.1 Past Performance. The Offeror will be evaluated on the last three most recent ratings in the Construction Contractor Appraisal Support System (CCASS). Should the Offeror have less than three ratings in the CCASS, it must supplement the number of ratings by providing a relevant project(s) of which it has worked on, along with a detailed project description of each so that the total number of references equals three. If providing references for a relevant project, ensure the Contact Name(s) and Telephone number(s) are included. If the Offeror does not have any ratings in CCASS, the Offeror must submit names of three relevant projects of which it has worked on, along with a detailed project description of each and include references with contact names and phone numbers.

E. CHANGES TO SECTION 00600 – REPRESENTATIONS & CERTIFICATIONS

The following were previously included by reference and are now included by full text:

52.219-19 SMALL BUSINESS CONCERN REPRESENTATION FOR THE SMALL BUSINESS COMPETITIVENESS DEMONSTRATION PROGRAM (OCT 2000)

(a) Definition.

"Emerging small business" as used in this solicitation, means a small business concern whose size is no greater than 50 percent of the numerical size standard applicable to the North American Industry Classification System (NAICS) code assigned to a contracting opportunity.

- (b) [Complete only if the Offeror has represented itself under the provision at 52.219-1 as a small business concern under the size standards of this solicitation.] The Offeror [] is, [] is not an emerging small business.
- (c) (Complete only if the Offeror is a small business or an emerging small business, indicating its size range.)

Offeror's number of employees for the past 12 months (check this column if size standard stated in solicitation is expressed in terms of number of employees) or Offeror's average annual gross revenue for the last 3 fiscal years (check this column if size standard stated in solicitation is expressed in terms of annual receipts). (Check one of the following.)

No. of Employees Avg. Annual Gross Revenues
50 or fewer \$1 million or less
51 - 100 \$1,000,001 - \$2 million
101 - 250 \$2,000,001 - \$3.5 million
251 - 500 \$3,500,001 - \$5 million
501 - 750 \$5,000,001 - \$10 million
751 - 1,000 \$10,000,001 - \$17 million
Over 1,000 Over \$17 million
(End of provision)

52.219-21 SMALL BUSINESS SIZE REPRESENTATION FOR TARGETED INDUSTRY CATEGORIES UNDER THE SMALL BUSINESS COMPETITIVENESS DEMONSTRATION PROGRAM (MAY 1999)

(Complete only if the Offeror has represented itself under the provision at 52.219-1 as a small business concern under the size standards of this solicitation.)

Offeror's number of employees for the past 12 months (check this column if size standard stated in solicitation is expressed in terms of number of employees) or Offeror's average annual gross revenue for the last 3 fiscal years (check this column if size standard stated in solicitation is expressed in terms of annual receipts). (Check one of the following.)

No. of Employees Avg. Annual Gross Revenues
50 or fewer \$1 million or less
51 - 100 \$1,000,001 - \$2 million
101 - 250 \$2,000,001 - \$3.5 million
251 - 500 \$3,500,001 - \$5 million
501 - 750 \$5,000,001 - \$10 million
751 - 1,000\$10,000,001 - \$17 million
Over 1,000 Over \$17 million
(End of provision)

F. CHANGES TO SECTION 00800 - SPECIAL CONTRACT REQUIREMENTS

The following have been modified:

52.211-10 COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK (APR 1984)

The Contractor shall be required to (a) commence work under this contract within 10 calendar days after the date the Contractor receives the notice to proceed, (b) prosecute the work diligently, and (c) complete the entire work, ready for use not later than 491 Calendar days after the date that the contractor receives the Notice to Proceed with the exception of Maintenance and Monitoring of permanently planted areas, wet and wet mesic restoration area, and specified burning and maintenance, and monitoring of the Oak Savannah Restoration area. After completion of permanent plantings, the Contractor shall commence the maintenance and monitoring period and complete work not later than 1,520 consecutive calendar days after the initial Notice to Proceed. Maintenance and monitoring will be required for permanently planted areas for a period of 365 calendar days after planting as stated in Specification Section 02930. Detailed requirements and sequencing of work are included for the wet and wet mesic restoration area and the oak savannah restoration area in Specification Section 02930. The time stated for completion shall include final cleanup of the premises. Final acceptance of the entire project will occur after the maintenance and monitoring period is completed and accepted by the Contracting Officer.

(End of clause)

52.211-12 LIQUIDATED DAMAGES--CONSTRUCTION (SEP 2000)

- (a) If the Contractor fails to complete the work within the time specified in the contract, the Contractor shall pay liquidated damages to the Government in the amount of \$1,409.00 for each calendar day of delay until the work is completed or accepted. Liquidated damages do not apply to <u>Line Items number 0007 and 0040</u>.
- (b) If the Government terminates the Contractor's right to proceed, liquidated damages will continue to accrue until the work is completed. These liquidated damages are in addition to excess costs of repurchase under the Termination clause.

(End of clause)

52.211-11 LIQUIDATED DAMAGES--SUPPLIES, SERVICES, OR RESEARCH AND DEVELOPMENT (SEP 2000)

- (a) If the Contractor fails to deliver the supplies or perform the services <u>under Line Items 0007 and 0040</u> within the time specified in this contract, the Contractor shall, in place of actual damages, pay to the Government liquidated damages of \$503.00 per calendar day of delay.
- (b) If the Government terminates this contract in whole or in part under the Default--Fixed-Price Supply and Service clause, the Contractor is liable for liquidated damages accruing until the Government reasonably obtains delivery or performance of similar supplies or services. These liquidated damages are in addition to excess costs of repurchase under the Termination clause.
- (c) The Contractor will not be charged with liquidated damages when the delay in delivery or performance is beyond the control and without the fault or negligence of the Contractor as defined in the Default-Fixed-Price Supply and Service clause in this contract.

(End of clause)

G. The Point of Contact for this Amendment is David Dilks at 312-846-5373.

ITEM NO 0025	SUPPLIES/SERVICES Cellular Concrete Block FFP	QUANTITY 21,750	UNIT Square Foot	UNIT PRICE	AMOUNT
				NET AMT	
ITEM NO 0026	SUPPLIES/SERVICES Geotextile Fabric FFP	QUANTITY 45,715	UNIT Square Foot	UNIT PRICE	AMOUNT
				NET AMT	
ITEM NO 0027	SUPPLIES/SERVICES 24-Inch CMP FFP	QUANTITY 90	UNIT Linear Foot	UNIT PRICE	AMOUNT
				NET AMT	

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ITEM NO 0031	SUPPLIES/SERVICES 36-Inch Flared End Section FFP	QUANTITY 3	UNIT Each	UNIT PRICE	AMOUNT
				NET AMT	
ITEM NO 0032	SUPPLIES/SERVICES 8-Inch Flexible Check Val-	QUANTITY 1 ves	UNIT Each	UNIT PRICE	AMOUNT
				NET AMT	
ITEM NO 0033	SUPPLIES/SERVICES 18-Inch Flexible Check Va FFP	QUANTITY 2 llves	UNIT Each	UNIT PRICE	AMOUNT
				NET AMT	

c. All insuring companies must be rated A, or Superior, by A.M. Best Company, an independent insurance rating service.

Comprehensive General Liability (Occurrence Policy Form Only)

General Aggregate	\$2,000,000
Products/Completed Operations	\$2,000,000
Each Occurrence	\$1,000,000
Fire Damage Legal Liability	\$50,000

Comprehensive Automobile Liability (Including Hired Automobile Liability and Non-Owned Automobile Liability)_

Combined Single Limit \$1,000,000

Employers' Liability

Each Occurrence \$500,000

Policy Limit \$500,000

Each Employee \$500,000

(Or Statutory Limits if higher)

Workers Compensation (As Required by State Law or Federal Law)

Umbrella Liability
(Occurrence policy form only)
Each Occurrence and Aggregate

\$5,000,000

d. Prior to commencement of work hereunder, the Contractor shall furnish to the Contracting Officer a certificate or written statement of the above required insurance. The policies evidencing required insurance shall contain an endorsement to the effect that cancellation or any material change in the policies adversely affecting the interests of the Government in such insurance shall not be effective for such period as may be prescribed by the laws of the State in which contract is to be performed an in no event less than thirty (30) days after written notice thereof to the Contracting Officer.

1.12 TIME EXTENSIONS FOR UNUSUALLY SEVERE WEATHER

This clause specifies the procedure for the determination of time extensions for unusually severe weather in accordance with the CONTRACT CLAUSE entitled "DEFAULT (FIXED-PRICE CONSTRUCTION)." In order for the Contracting Officer to award a time extension under this clause, the following conditions must be satisfied.

a. The weather experienced at the project site during the contract period must be found to be unusually severe, that is, more severe than the adverse weather anticipated for the project location during any given month.

The following schedule of monthly anticipated adverse weather delays is based on National Oceanic and Atmospheric Administration (NOAA) or similar

1.3.16.2 Block Measurement

Cellular concrete block will be measured for payment in square feet of cellular concrete block placed in the accepted work area.

Unit of Measure: Square Feet (SF)

1.3.17 Geotextile Fabric Bid Item No. 0026

1.3.17.1 Payment

Payment for geotextile fabric will be made at the contract unit price per square foot of fabric installed in the accepted work area.

1.3.17.2 Measurement

Geotextile fabric will be measured in square feet of geotextile fabric actually installed in the accepted work area.

Unit of Measure: Square Foot (SF)

1.3.18 24-Inch CMP Bid Item No. 0027

1.3.18.1 Payment

Payment will be made at the contract unit price for the number of linear feet of culvert placed in the accepted work area.

1.3.18.2 Measurement

The length of pipe installed will be measured along the centerline of the pipe from end to end of pipe.

Unit of Measure: Linear Foot (LF)

1.3.19 36-Inch RCP Bid Item No. 0028

1.3.19.1 Payment

Payment will be made at the contract unit price for the number of linear feet of culvert placed in the accepted work area.

1.3.19.2 Measurement

The length of pipe installed will be measured along the centerline of the pipe from end to end of pipe.

Unit of Measure: Linear Foot (LF)

1.3.20 36-Inch Flap Gate Bid Item No. 0029

1.3.20.1 Payment

Payment will be made at the contract unit price for 36-inch flap gates installed in the accepted work area.

1.3.20.2 Measurement

Flap gates will be measured by the unit.

determined by the Contracting Officer shall be measured in cubic yards. The volume of aggregate surface course shall be determined by the average job thickness obtained in accordance with the paragraph "Thickness Control" of Section 02731 Aggregate Surface and Subbase Course multiplied by the surveyed area for aggregate surface course (CA-17) placed.

Unit of Measure: Cubic Yard (CY)

1.3.29 Granular Subbase Course (IDOT CA-6) Bid Item No. 0038

1.3.29.1 Payment

Payment will be made at the contract unit price for granular subbase course actually placed in the accepted work area.

1.3.29.2 Measurement

The quantity of granular subbase completed and accepted shall be measured in cubic yards. The volume of granular subbase shall be determined by the average job thickness obtained in accordance with the paragraph "Thickness Control" of Section 02731 Aggregate Surface and Subbase Course, multiplied by the surveyed area for granular subbase placed.

Unit of Measure: Cubic Yard (CY)

1.3.30 Fencing Bid Item No. 0039

1.3.30.1 Payment

Payment for chainlink fencing will be made at the contract unit price per linear foot for "Chainlink Fence" as specified.

1.3.30.2 Measurement

Chainlink fence shall be measured for payment to the nearest linear foot.

Unit of Measure: Linear Foot (LF)

1.3.31 Permanent Seeding Bid Item No. 0040

1.3.31.1 Payment

Payment for permanent seeding will be made at the contract unit price per acre of seeding established and shall constitute full compensation for all labor, equipment, and materials including seed, soil amendments, mulch, water, and pesticides required, and all maintenance and monitoring.

1.3.31.2 Measurement

Permanent seeding shall be measured in acres of seeding actually placed in the accepted work area.

Unit of Measure: Acre

1.3.32 Temporary Seeding Bid Item No. 0041

1.3.32.1 Payment

Payment for temporary seeding will be made at the contract unit price per

2.5 MATERIAL

2.5.1 Steel

Bridges shall be fabricated from ASTM A 588/A 588M, (Fy) greater than 50,000 psi and tubular sections from ASTM A 847, (Fy) greater than 50,000 psi.

2.5.2 Steel Plates

ASTM A 588/A 588M, Grade 50.

2.5.3 Steel Rails

ASTM A 588/A 588M or ASTM A 847, Grade 50.

2.5.4 Bolts, Nuts, and Washers

Bolts, nuts, and washers shall be of the material, grade, type, class, style, and finish indicated or best suited for intended use.

2.5.4.1 High-Strength Bolts, Nuts, and Washers

ASTM A 325, Type 3.

- 2.5.4.2 Bolts, Nuts, and Washers (Other Than High-Strength)
 - a. Bolts and Nuts. ASTM A 307, Grade A.
 - b. Bolts. ASME B18.2.1.
 - c. Nuts. ASME B18.2.2.
 - d. Washers.
 - (1) Plain Washers. ASME B18.22.1, Type B.
 - (2) Lock Washer. ASME B18.22.1.
 - (3) Beveled Washers. ASTM F 436, Type 1, Beveled.

2.5.4.3 Treated Lumber Fastener

Fasteners shall be stainless steel ASTM F 593, Type 304.

2.5.5 Wood Decking and Rub Rail

Wood decking and rub rail shall be Select Structural Fir or No. 1 Dense Southern Yellow Pine planks (minimum Fb=1, 400 psi). Decking and rub rail to be treated to AWPA Standard PS. Wood shall be treated with alkaline copper quat (ACQ types B and D) or copper azole (CBA-A, CA-B). Decking shall be treated to a total absorption of 0.40 pounds per cubic foot of wood or to refusal. Deck planks shall be nominal 3 inch by 12 inch for the 10,000 pound vehicle load.

Wood planks shall be installed at the factory, tight with no gaps between the planks. Wood planks shall be attached with a continuous plank hold down angle along each edge of the deck. One stainless steel carriage bolt shall be installed at the edge of the deck through every other plank. Wood planks shall also be attached at the center of each bridge with two stainless steel carriage bolts per plank bolted through a clip angle that is welded to the center stringer. Self-tapping screws shall not be used due to their tenancy to work loose

PART 2 PRODUCTS

2.1 SEED

2.1.1 Seed Classification

State-approved seed of the latest season's crop shall be provided in original sealed packages bearing the producer's guaranteed analysis for percentages of mixture, purity, germination, hard seed, weed seed content, and inert material. Labels shall be in conformance with AMS-01 and applicable state seed laws.

2.1.2 Permanent Seed Species and Mixtures

Permanent seed species and mixtures shall be proportioned by weight. The seed species mixture shall be a minimum of 80 percent pure live seed for each species. The mixture shall be native warm season grasses. The Contractor shall provide the mixture component names, classification, and percent live seed to the Contracting Officer for approval prior to procurement of the product. This includes all areas shown as seeding on Sheets C-29 and C-30.

2.1.3 Temporary Seed Species

Temporary seeding shall include all areas shown for seeding on Sheets C-29 and C-30 and all exterior planting areas shown on Sheets C-28 and C-29. Temporary seed species for surface erosion control or overseeding shall be as follows:

Botanical Name	Common Name	Percent Pure Live Seed
		
Lolium multiflorum	Annual rye grass	95

2.1.4 Quality

Weed seed shall be a maximum 1 percent by weight of the total mixture.

2.1.5 Seed Mixing

The mixing of seed may be done by the seed supplier prior to delivery, or on site as directed. The temporary and permanent seed may be mixed together prior to planting.

2.1.6 Substitutions

Substitutions will not be allowed without written request and approval from the Contracting Officer.

2.2 TOPSOIL

Topsoil shall be as defined in ASTM D 5268. When available, the topsoil shall be the existing surface soil stripped and stockpiled onsite in accordance with Section 02300 EARTHWORK. When additional topsoil is required beyond the available topsoil from the stripping operation, topsoil shall be delivered and amended as recommended by the soil test for the seed specified. Topsoil shall be free from slag, cinders, stones, lumps of soil, sticks, roots, trash or other material over a minimum 1-1/2 inch diameter. Topsoil shall be free from viable plants and plant parts.

2.7 PESTICIDE

Pesticide shall be insecticide, herbicide, fungicide, nematocide, rodenticide or miticide. For the purpose of this specification, a soil fumigant shall have the same requirements as a pesticide. The pesticide material shall be EPA registered and approved.

2.8 SURFACE EROSION CONTROL MATERIAL

Surface erosion control material shall conform to the following:

2.8.1 Surface Erosion Control Blanket

Blanket shall be machine produced mat of wood excelsior formed from a web of interlocking wood fibers; covered on one side with either knitted straw blanket-like mat construction; covered with biodegradable plastic mesh; or interwoven biodegradable thread, plastic netting, or twisted kraft paper cord netting.

2.8.2 Surface Erosion Control Fabric

Fabric shall be knitted construction of polypropylene yarn with uniform mesh openings 3/4 to 1 inch square with strips of biodegradable paper. Filler paper strips shall have a minimum life of 6 months.

2.8.3 Surface Erosion Control Net

Net shall be heavy, twisted jute mesh, weighing approximately 1.22 pounds per linear yard and 4 feet wide with mesh openings of approximately 1 inch square.

2.8.4 Surface Erosion Control Chemicals

Chemicals shall be high-polymer synthetic resin or cold-water emulsion of selected petroleum resins.

2.8.5 Hydrophilic Colloids

Hydrophilic colloids shall be physiologically harmless to plant and animal life without phytotoxic agents. Colloids shall be naturally occurring, silicate powder based, and shall form a water insoluble membrane after curing. Colloids shall resist mold growth.

2.8.6 Erosion Control Material Anchors

Erosion control anchors shall be as recommended by the manufacturer.

PART 3 EXECUTION

3.1 INSTALLING SEED TIME AND CONDITIONS

3.1.1 Seeding Time

Seed shall be installed from April 15 to July 15 or September 1 to November 30, if ground conditions are suitable. Prior to seeding, the Contractor shall obtain approval from the Contracting Officer.

surface. Sunlight shall not be completely excluded from penetrating to the ground surface.

3.3.3.6 Wood Cellulose Fiber, Paper Fiber, and Recycled Paper

Wood cellulose fiber, paper fiber, or recycled paper shall be applied as part of the hydroseeding operation. The mulch shall be mixed and applied in accordance with the manufacturer's recommendations.

3.3.4 Watering Seed

The seed mixture shall be watered as necessary to prevent desiccation and to maintain an adequate supply of moisture within the root zone. Water shall be applied to supplement rainfall at a rate sufficient to ensure moist soil conditions to a minimum 1 inch depth. Run-off and puddling shallbe prevented. Watering trucks shall not be driven over turf areas, unless otherwise directed. Watering of other adjacent areas or plant material shall be prevented.

3.4 SURFACE EROSION CONTROL

3.4.1 Surface Erosion Control Material

Where indicated or as directed, surface erosion control material shall be installed in accordance with manufacturer's instructions. Placement of the material shall be accomplished without damage to installed material or without deviation to finished grade.

3.4.2 Temporary Seeding

The application rate shall be 450 pounds of seed per acre and 1,000 gallons of slurry per acre. When directed during contract delays affecting the seeding operation or when a quick cover is required to prevent surface erosion, the areas designated shall be seeded in accordance with temporary seed species listed under Paragraph SEED.

3.4.2.1 Soil Amendments

When soil amendments have not been applied to the area, the quantity of 1/2 of the required soil amendments shall be applied and the area tilled in accordance with paragraph SITE PREPARATION. The area shall be watered in accordance with paragraph Watering Seed.

3.4.2.2 Remaining Soil Amendments

The remaining soil amendments shall be applied in accordance with the paragraph Tillage when the surface is prepared for installing seed.

3.4.3 Permanent Seeding

The application rate shall be 450 pounds of seed per acre. The seed shall be applied according to industry standards.

3.5 QUANTITY CHECK

For materials provided in bags, the empty bags shall be retained for recording the amount used. For materials provided in bulk, the weight certificates shall be retained as a record of the amount used. The amount of material used shall be compared with the total area covered to determine the rate of application used. Differences between the quantity applied and

3.5.4 Pruning

Pruning shall be accomplished by trained and experienced personnel. The pruning of trees and palms shall be in accordance with ANSI A300. Only dead or broken material shall be pruned from installed plants. The typical growth habit of individual plant material shall be retained. Clean cuts shall be made flush with the parent trunk. Improper cuts, stubs, dead and broken branches shall be removed. "Headback" cuts at right angles to the line of growth will not be permitted. Trees shall not be poled or the leader removed, nor shall the leader be pruned or "topped off".

3.6 MAINTENANCE DURING PLANTING OPERATION

Installed plant material and seed mixtures shall be maintained in a healthy growing condition. Maintenance operations shall begin immediately after each plant and seed is installed to prevent desiccation and shall continue until the plant establishment period commences. Installed areas shall be kept free of undesired vegetation. The maintenance includes maintaining the mulch, watering, and adjusting settling.

3.7 APPLICATION OF PESTICIDE

When application of a pesticide becomes necessary to remove a pest or disease, a pesticide treatment plan shall be submitted and coordinated with the installation pest management program.

3.7.1 Technical Representative

The certified installation pest management coordinator shall be the technical representative, and shall be present at all meetings concerning treatment measures for pest or disease control. They may be present during treatment application.

3.7.2 Application

A state certified applicator shall apply required pesticides in accordance with EPA label restrictions and recommendations. Clothing and personal protective equipment shall be used as specified on the pesticide label. A closed system is recommended as it prevents the pesticide from coming into contact with the applicator or other persons. Water for formulating shall only come from designated locations. Filling hoses shall be fitted with a backflow preventer meeting local plumbing codes or standards. Overflow shall be prevented during the filling operation. Prior to each day of use, the equipment used for applying pesticide shall be inspected for leaks, clogging, wear, or damage. Any repairs are to be performed immediately.

3.8 RESTORATION AND CLEAN UP

3.8.1 Restoration

Turf areas, pavements and facilities that have been damaged from the planting operation shall be restored to original condition at the Contractor's expense.

3.8.2 Clean Up

Excess and waste material shall be removed from the installed area and shall be disposed offsite. Adjacent paved areas shall be cleared.

HOLE NO. DCL-1 DIVISION INSTALLATION DRILLING LOG SHEET OF SHEETS 1. PROJECT JOB NUMBER 10. SIZE AND TYPE OF BIT HSA 11. DATUM FOR ELEVATION SHOWN (TBM or MSL) 30302 Deer Creek 2. LOCATION (Coordinates or Station) N 1,768,824.2699 E 1,187,792.0992 Ford Hts., IL 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY Diedrich D-50 Fox Drilling 13. TOTAL NO. OF OVER-DISTURBED UNDISTURB 4. HOLE NO. (As shown on drawing **BURDEN SAMPLES TAKEN** 7 DCL-1 title and file number) 14. TOTAL NUMBER CORE BOXES 5. NAME OF DRILLER 15. DEPTH GROUND WATER 616.6 WD, 618.7 AB,22.4-24 hr. Don Eger 6. DIRECTION OF HOLE STARTED COMPLETED 16. DATE HOLE DEG. FROM VERT 3-31-99 3-31-99 ☐ INCLINED X VERTICAL 17. ELEVATION TOP OF HOLE 626.1 15' 7. THICKNESS OF OVERBURDEN 18. TOTAL CORE RECOVERY FOR BORING % 1 8. DEPTH DRILLED INTO ROCK 0 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE 15.0 % CORE BOX OF REMARKS CLASSIFICATION OF MATERIALS ELEVATION DEPTH RECOV-SAMPLE LEGEND (Drilling time, water loss, depth (Description) (ft) (ft) ERY NO. weathering, etc., if significant) b đ Not sampled 625.1 1.0 Black silty clay, trace sand - very stiff (CL) 3-3-5 11", Qp = 2.0 tsfS-1, 14" 624.2 1.9 S-1A Qp = 2.25 tsfGray and brown silty clay 3" - very stiff (CL) 3" LL=40. PI=23 622.6 3.5 Brown and gray silty clay - stiff (CL) Torvane 4.25 tsf WC=31.4%, LL=33, PI=18 Qp = 1.5 tsfQu=0.66, Dry Wt.=99.0 pcf 28" S-2 6.0 620.1 Brownish gray clayey silt - medium (ML) 2-3-5 WC=26.2% Qp = 0.75 tsf16" S-3 8.5 617.6 Fine sandy silt, trace clay - gray - medium -1-3-5 wet (ML) Qp = 0.5 tsf15" 11.0 615.1 2-3-6 Gray silty clay, seams of clayey silt and silt very stiff (CL) Qp = 2.0 tsf18* S-5 WC=23.4%, LL=34, PI=16 13.5 612.6 1-5-7 Sandy silt, trace clay (ML) 10° WC=20.3% **S6** 14.3 611.8 18" S-6A Silty fine to medium sand - saturated (SM) 8. 15.0 611.1 Note: Seams of silt. WC=25.8% End of Boring Offset 25' south due to overhead power lines. Backfilled with bentonite chips. Qp = Hand Penetrometer 3 - 1

HOLE NO. DCL-2_

				LINICTALL	TION				
DRILLI	ING L	og∣™	VISION	INSTALLA	TION			SHEET OF 1 SH	1 HEETS
1. PROJECT			JOB NUMBER	AND TYPE OF	BIT	HSA			
Deer Cre	a k		30302	11. DATUM FOR ELEVATION SHOWN (TBM or MSL)					
		Ctation)	3332	NGV					
2. LOCATION (Coordinates	or Station	19 400 4040 Ford Hts II			DESIGNA	TION OF DRILL		
N 1,767,402.9449 E 1,188,400,4940 Ford Hts., IL					rich D-50	DEGIGITA	THOR DINEE		
3. DRILLING AGENCY							DIOTI IDDED		
Fox Drillin				4	L NO. OF OV			UNDISTURBE	D
4. HOLE NO. (A		drawing	DCL-2	BUHDEN	SAMPLES TA	WEN .	7	0	
title and file nu			DCL-2	14. TOTAL	L NUMBER C	ORE BOXE	S		
5. NAME OF DE				15 DEPT	H GROUND V	VATER	619.1 WD, 619.	O A D	
Don Eger				13. DEF 11	n Ghoonb t				
6. DIRECTION	OF HOLE			16. DATE	HOLE	151	ARTED COM	PLETED	
X VERTICA	™ □	INCLINED	DEG. FROM VERT.			<u>+</u>		3-31-99	
			15'	17. ELEV	ATION TOP C	F HOLE	628.1		
7. THICKNESS	OF OVERB	URDEN		18. TOTAL	L CORE REC	OVERY FO	R BORING		%
8. DEPTH DRILL	LED INTO F	ROCK	0	19 SIGNA	TURE OF IN	SPECTOR	<u> </u>	- i	
9. TOTAL DEPT	DH OF HOLE		15.0] '3. 3.3.		J. 2010.1	Brian Kanin	1_	
5. 10 the 52. 1			CLASSIFICATION OF MATERIALS		% CORE	BOX OR	REMARI	(S	
ELEVATION	DEPTH	LEGEND	(Description)	-	RECOV-	SAMPLE	(Drilling time, water		
(ft)	(ft)	c	d (Seascipton)		ERY	NO.	weathering, etc., i	significant) .	
a	ь		12 in. topsoil		 	 	y		
			1						
627.1	1.0	5 77 75				<u> </u>			
			Brown and gray silty clay, little sand a	nd			4-6-7		
			gravel - very stiff (CL)		14"	S-1	Qp = 2.75 tsf		
		<i>\\\\\\\</i>	4						
							,		
						1			
624.6	3.5				•				
024.0	3.5—		Brown and gray silty clay, trace sand	and		i	1-3-3		
			gravel - very stiff (CL)		4.00		Qp = 2.75 tsf		
			WC=17.3%, LL=30, PI=15		13"	S-2			
]		
,						}			
622.1	6.0						1.00		
		<i>\////////////////////////////////////</i>	Brown and gray silty clay, trace sand,	seams		<u> </u>	1-2-2 Qp = 0.75 tsf		
			of silt and sand - medium (CL) LL=25, PI=11		13"	S-3	Qp = 0.75 (S)		
1			LL=25, FI= 11						
						<u> </u>			
1	ŀ								
619.6	8.5								
"			Gray silty clay, trace sand				1-0-2		
	}		Occasional silt seams - soft - wet (CL))	17"	S-4	Qp = 0.25		
		<i>\\\\\\\</i>	WC=21.9%, LL=27, PI=12		' <i>'</i>				
]									
	1	<i>\\\\\\\</i>							
617.1	11.0		Gray fine sandy silt (ML)				2-2-4		
			Occasional sand seams - medium - w	et -	ł		Qp = 0.5 tsf		
			saturated		17"	S-5			
			WC=19.7%						
							1		
614.6	13.5		·						
	1		Gray fine to medium sand, trace sitt -			13"	1-1-4		
			saturated (SP) WC=24.1%		18*	S-6	Op = 0.25 tsf		
613.5	14.6	14. (A. (A.			' '	S-6A			
613.1	15.0		Gray silt, trace sand - soft (ML) WC=	24.7%		5*			
	1 -		End of Boring						
1	l		Offset 40' east due to trees & obstruct	tions.		į	1		
			Backfilled with bentonite chips.						
			Qp = Hand Penetrometer						
1	1				1				

HOLE NO. DCL DIVISION INSTALLATION **DRILLING LOG** SHEETS 1. PROJECT JOB NUMBER 10. SIZE AND TYPE OF BIT HSA 11. DATUM FOR ELEVATION SHOWN (TBM or MSL) 30302 Deer Creek 2. LOCATION (Coordinates or Station) N 1,766,380.9809 E 1,189,713.9407 Ford Hts., iL 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY Diedrich D-50 Fox Drilling 13. TOTAL NO. OF OVER-DISTURBED UNDISTURBE 4. HOLE NO. (As shown on drawing **BURDEN SAMPLES TAKEN** 6 DCL-3 title and file number) 14. TOTAL NUMBER CORE BOXES 5. NAME OF DRILLER 15. DEPTH GROUND WATER Don Eger 622.4 WD, 623.0 AB 6. DIRECTION OF HOLE STARTED COMPLETED 16. DATE HOLE 3-31-99 3-31-99 X VERTICAL DEG. FROM VERT. ☐ INCLINED 17. ELEVATION TOP OF HOLE 632.4 7. THICKNESS OF OVERBURDEN 15' 18. TOTAL CORE RECOVERY FOR BORING 8. DEPTH DRILLED INTO ROCK 0 19. SIGNATURE OF INSPECTOR . 15.0 9. TOTAL DEPTH OF HOLE CLASSIFICATION OF MATERIALS % CORE BOX OR REMARKS **ELEVATION** DEPTH RECOV-SAMPLE LEGEND (Drilling time, water loss, depth (Description) (ft) (ft) ERY NO. weathering, etc., if significant) c b đ Not sampled 631.4 1.0 Brown and gray silty clay - stiff (CL) 2-4-5 Qp = 1.0 tsf8* 5-1 628.9 3.5 Brown and gray silty clay - very stiff (CL) Torvane 3.25 tsf WC=23.3%, LL=36, PI=19, Qp = 3.5 tsfDry Wt.=105.7 pcf, c=1.0 tsf 27° S-2 626.4 6.0 Brown and gray silty clay - very stiff (CL) 2-2-4 LL=33, PI=16 Qp = 2.75 tsf14° 623.9 8.5 Gray sandy silt - soft - wet (ML) 1-2-3 WC=24.1% Qp = 0.25 tsf16" S-4 621.4 11.0 Gray silty sand, seams of silt and sand (SM) 2-3-3 WC=21%, Dry Wt.=105.7 pcf 14" S-5 0% gravel, 10.9% sand, 89.1% fines 13.5 618.9 Alternating seams of silt and sand (SM-ML) 3-5-7 WC=25.7% (#6 SM-ML) S-6 14" WC=20.0% (#6A SM) S-6A 617.4 15.0 End of Bonng Backfilled with bentonite chips. Qp = Hand Penetrometer 3 - 3

PROJECT

HOLE NO.

TORMOLIC EDITIONS ARE COSOL ETE

AMERICAN CONTRACTOR OF THE SECOND

HOLE NO. DCL-4

	1101	OO DIV	VISION		INSTALLA	TION			SHEET	1	
DRILLI	NG L	OG			 			UCA	OF 1	SHEET	
1. PROJECT	_1.			30302	10. SIZE AND TYPE OF BIT HSA 11. DATUM FOR ELEVATION SHOWN (TBM or MSL)						
Deer Cre		Ctation)		30302	NGVD						
2. LOCATION (C	Coordinates 161 7311	E 1.18	9.920.7816 Fo	rd Hts., IL			S DESIGNA	TION OF DRILL			
N 1,764,961.7311 E 1,189,920.7816 Ford Hts., IL 3. DRILLING AGENCY				Diedr	ich D-50				(
Fox Drilling	ng					NO. OF OV		DISTURBED	UNDISTURB	ED	
4. HOLE NO. (A		drawing		DCL-4	BURDEN	SAMPLES TA	KEN	6	0		
5. NAME OF DE				DCL-4	14. TOTA	L NUMBER C	ORE BOXE	S			
Don Eger					15. DEPT	H GROUND Y	WATER 62	21.6 WD, 622.2	AB, 622.8-24 I	hr.	
6. DIRECTION					16. DATE	HOLE	'ST	ARTED	COMPLETED		
X VERTICA	N . [INCLINED		DEG. FROM VERT.				3-31-99	3-31-99	<u> </u>	
7. THICKNESS	OF OVERB	URDEN		15'		ATION TOP C		63	1.6		
8. DEPTH DRIL				0		CORE REC				•	
9. TOTAL DEPT				15.0	19. SIGNA	TURE OF IN	SPECTOR	Brian Zan			
			CLASSIF	CATION OF MATERIALS	<u>. </u>	% CORE	BOX OR		REMARKS		
ELEVATION (ft)	DEPTH (ft)	LEGEND		(Description)		RECOV- ERY	SAMPLE NO.		me, water loss, depth ig, etc., if significant)		
a	Ъ	c		<u>d</u>			1		9		
			6 in. topsoil								
630.6	1.0	1. 24 11		- 10	-4:44		<u> </u>	1225			
			Brown and gray	silty clay, trace roots	- stiff	11*	S-1	3-3-5 Qp = 1.5 tsf			
			(02)				<u> </u>	-		. •	
l											
						İ	1				
628.1	3.5						<u> </u>			•	
			Brown and gray : WC=24.5%, LL=					2-3-3 Qp = 1.5 tsf			
			WO-24.578, EE-	07,77-27		9*	S-2				
	1					<u> </u>	ļ	1			
	ļ										
625.6	6.0					<u> </u>	<u> </u>				
]		Sandy clay, sear LL=24, Pl=9	ns of silt and sand - s	stiff (CL)			2-2-4 Qp = 1.0 tsf			
			LL-24, 1 1-3			18*	S-3			•	
							<u> </u>	_			
ł	İ]				
623.1	8.5						<u> </u>	-		•	
l			Brownish gray si wet (SM)	Ity sand, seams of sil	t - stiff -			2-4-6 Qp = 1.0 tsf			
			WC=20.2%			14*	S-4			_	
							<u> </u>	4		•	
							1				
620.6	11.0						<u> </u>	4.5.0			
		••••••	Gray sand, trace (SW)	silt and gravel - satu	rated			4-6-9		•	
			WC=15.8%			12*	S-5				
								4			
										•	
618.1	13.5						-	1			
		:::::: :::	Gray sand, trace (SW)	silt and gravel - satu	rated			4-4-9			
			Occasional silt s	eams.		18*	S-6			•	
616.6	15.0	::::::::					<u> </u>	-			
			End of Bonng Backfilled with be	entonite chine							
			Op = Hand Pene								
										_	
										•	
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				3 4							
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1 ,

HOLE NO. DCL-5

			1140101		INCTALL	TON					===	
DRILLI	NG L	ogľ	DIVISION		INSTALLA	IION					IEET = 1	1 SHEETS
1. PROJECT				JOB NUMBER		ND TYPE O		HSA				OTTLE TO
Deer Cree	ek			30302	1	M FOR ELEV	ATION SHO	OWN (TBM	or MSL)			
2. LOCATION (Coordinates	or Station	1)		NGV							-4
		E 1,1	89.913.7573 Fo	rd Hts., IL	1	FACTURER'	S DESIGNA	TION OF	DRILL			
3. DRILLING AG						ich D-50 L NO. OF OV	·E0	LOIST	URBED	1.00.0	VOT 101	-
Fox Drillin		drawing				SAMPLES T		I DIST	6	ONL	ISTURE 0	
title and file nu		Ulawing.	1	DCL-5								
5. NAME OF DE						L NUMBER C						
Don Eger	•				15. DEPTI	H GROUND			2.5 WD,	622.5 A		
6. DIRECTION	OF HOLE				16. DATE	HOLE	;st	ARTED	00	COMPLE		_
X VERTICA	~ □] INCLINE	D	DEG. FROM VERT.				3-29			-29-9	9
7. THICKNESS	OF OVERB	URDEN		15'	17. ELEV	ATION TOP C	OF HOLE		635	.5		
8. DEPTH DRILL				0		L CORE REC			3			
				15.0	19. SIGNA	TURE OF IN	ISPECTOR	~	R	· · /	,	
9. TOTAL DEPT	H OF HOLI	<u> </u>	CLASSIE	CATION OF MATERIALS	<u> </u>	% CORE	BOX OR	Min		REMARKS		
ELEVATION	DEPTH	LEGEN		(Description)	•	RECOV-	SAMPLE		(Drilling tim	e, water los	s, dept	1
(ft)	(ft) b	c		d		ERY e	NO.		weil menné	g, etc., If sig g	micent)	
		24 27	Black clayey top	soil								
634.5	1.0	4.54.7	<u>'</u>									
034.5	'.0			y clay - stiff (CL)				2-4-5				
				•		9*	S-1	Qp = 1	.5 tsf			
						-	,					
								1				
						İ	1	1				
632.0	3.5			city class seitt (CL)				2-4-7				
			WC=43.6%, LL=	silty clay - stiff (CL) 55, PI=34				Qp = 1	.0 tsf			
1						4*	S-2					
İ	<u> </u>							_				
i							ł	1				
629.5	6.0							_				
				silty clay, trace sand	- stiff			2-3-3	05.4-4			
}			(CL) LL=35, PI=20			14"	S-3	Qp = 1	.25 t s t			
						}	1	ļ				
1								7				
607.0	0.5						1	1				
627.0	8.5	11111	Gray silty sand w	vith seams of silt - mo	oist			4-5-7				
			◯[(SM-ML)			13*	S-4					
			WC=19.4%									
1			8					1				
						ł						
624.5	11.0		Brown fine to an	dium sand, trace silt	- moiet			3-7-9				
			(SP)	ruium samu, mace siit	- moist	4-5-5	2-	5-7-3				
ĺ			WC=12.4%			17*	S-5					
i			1.4% gravel, 75.	2% sand, 23.4% fines	5			4				
			섞									
622.0	13.5		<u> </u>					1				
				ium sand, trace silt -				2-3-3				
			saturated (SP)			13*	S-6					
600.5	15.0											
620.5	13.0	1	End of Boring			T]				
			Backfilled with be									
		j	Qp = Hand Pene	trometer		1						
								1				
								}				
		1										
}												
							1					

HOLENO DCR-1

					701		TIOLL	IU. DUN-I		
DRILLI	NGI	OG lº''	VISION	INSTALLA	TION			SHEET 1		
			JOB NUMBER	10 SIZE 4	ND TYPE O	FRIT	HSA	OF 2 SHEETS		
1. PROJECT Deer Cree	a k		30302				OWN (TBM or MSL)			
·		or Ciption)	30002	NGVI			,			
2. LOCATION (C	Coordinates	or Station)	9,893.4226 Ford Hts., IL			S DESIGNA	TION OF DRILL			
3. DRILLING AG		L 1,10	35,030.4220 1 010 1 No., 12		ich D-50					
Fox Drillin					NO. OF OV	ER-	DISTURBED	UNDISTURBED		
4. HOLE NO. (A		drawno	1	•	SAMPLES TA		1 12	0		
title and file nu			DCR-1			005 0045				
5. NAME OF DE	NLLEA				L NUMBER C					
Don Eger				15. DEPTI	H GROUND I	NATER 62	6.3 WD, 625.6 AB,	625.5-24 hr.		
6. DIRECTION	OF HOLE			16. DATE	HOLE.	ST		APLETED		
X VERTICA	u 🗆	INCLINED	DEG. FROM VERT.	10. DATE	1000		3-30-99	3-30-99		
				17. ELEVA	ATION TOP C	OF HOLE	636.3			
7. THICKNESS	OF OVERB	URDEN	25'	18. TOTAL CORE RECOVERY FOR BORING						
8. DEPTH DRILL	LED INTO F	ROCK	0	19. SIGNATURE OF INSPECTOR 7						
9. TOTAL DEPT	TH OF HOLE		25.0	Brown Keinschen						
51.54.5001	OF DOTAL		CLASSIFICATION OF MATERIALS	5	% CORE	BOX OR	REMARKS			
ELEVATION (ft)	DEPTH (ft)	LEGEND	(Description)		RECOV- ERY	SAMPLE NO.	(Drilling time, wat weathering, etc.,			
a	, b	c	đ		е	1	9			
		r. • : • • • •	6 in. topsoil							
635.3	1.0	17.314 117]							
035.3	1.0		Black - gray - brown silty clay - stiff (C	CL)	<u> </u>	i	2-4-8			
1	•		WC=12.4%	,	14*	S-1	QP = 1.75 tsf			
['-	3-1				
							1			
632.8	3.5									
032.0	3.5		Gray and brown silty clay - stiff (CL)				3-3-5			
			WC=16.4%, LL=51, PI=31		9•	S-2	Qp = 1.25 tsf			
			Dry Wt. = 94.2 pcf		9	3.2				
							1			
630.3	6.0						1			
630.3	6.0		Brownish gray sand, trace gravel (SW	1)			Torvane 1.75 tsf			
			Signature gray carret made graves (a se	,						
					27"	S-3				
1										
607.0	0.5				1					
627.8	8.5		Brownish gray silt and sandy silt (ML)			7°	5-7-9			
627.2	9.1		WC=14.4%	,		S-4				
			Brown fine to medium sand - saturate	a (SP)	15"	S-4A				
						8*	_			
i										
625.3	11.0		Gray-brown fine to medium sand, trace	e oravel			3-6-7			
			(SP)	U GIATOI						
			WC=14.4%,		14*	S-5				
			5.0% gravel, 80.7% sand, 14.3% fines	S						
622.8	13.5		3 in array aged (CD)		 	3.	2-5-6			
622.6	13.8		3 in. gray sand (SP) Gray silt - sand seams, trace clay - sti	iff (ML)	1	3° S-6	2-3-0			
1			WC=21.3%	(1412)	13*	S-6A				
						10°				
620.3	16.0						7 12 11			
			Gray silt (ML)				7-12-11			
			Seams of sand (SW) WC=20.7%		12"	S-7				
			VVC=20.7/0							
						-	-			
617.8	18.5						1			
			Silty fine to medium sand (SM)				3-5-11			
			WC=19.1%	18° S-8						
			3-6	3-6						
		racination of the					1			

DRILL 1. PROJECT Deer Cre 2. LOCATION (OG	IVISION		INSTALL	ATION				SHEET	2
Deer Cre					1					IOE 2 cu	_
				JOB NUMBER		AND TYPE O		HSA		OF 2 S	HEETS
2: LOCATION (30302	1		ATION S	HOWN (TBM	or MSL)		_
			8 9.893.4226 Fo	rd Hts II	NGV		S DESIGN	NATION OF D	1011		
3. DRILLING A					-i	rich D-50	0 000.0.				
Fox Drillin					4	L NO. OF OV		OIST	JABED	UNDISTURBE	, -
4. HOLE NO. (A		drawing	!	DCR-1		SAMPLES T		!	12	1 0	
5. NAME OF DE	RILLER		,			L NUMBER C					
Don Eger					15. DEPT	H GROUND	WATER (626.3 WD		B, 625.5-24 hi	
6. DIRECTION (INCLINED		DEG. FROM VERT.	16. DATE	HOLE	· s	STARTED 3-30-	99	COMPLETED 3-30-99	
7. THICKNESS				25'	17. ELEV	ATION TOP C	F HOLE		636.3		
8. DEPTH DRILL				0	18. TOTAL	L CORE REC	OVERY F	OR BORING			7
9. TOTAL DEPT				25.0	19. SIGNA	TURE OF IN	SPECTOR	/	2.	. //	
ELEVATION		<u> </u>	CLASSIFIC	CATION OF MATERIALS		% CORE	BOX OF		REA	MARKS	
(ft)	DEPTH (ft)	LEGEND		(Description)		RECOV- ERY	SAMPLE NO.		Drilling time.	water loss, depth tc., if significant)	•
	b	्ट इ.स.च्या	Cilo tipo to podi:	d			f			g	
			Silty fine to mediu	ım sand (SM)							
615.3	21.0		Silty sand seame	of silt and sand - sa	lutated			7-9-9			4
			(SM)			18*	S-9	7-3-3			
			1.9% gravel, 56.2	% sand, 41.9% fines		10	J.3				
					İ			+			•
612.8	23.5				}						
				of silt - saturated (Si	M)			3-5-14			
			WC=19.6%			14"	S-10				•
611.3	25.0										
1			End of Boring Backfilled with ber	ntonite chips				1.		4	٠.
			Qp = Hand Penetr		-						
İ	J										
	İ				-						
	1										
ĺ											
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1						j					
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										_	
											THE STATE OF THE S
				3-7							~
NG EODM			EDITIONS 405 0050			-				. WA E AIA	

HOLE NO. DCR-2

DRILLI	NG L	OG	DIV	ISION		INSTALLA	TION			SHEET 1 OF 2 SHEETS
1. PROJECT			<u></u>		JOB NUMBER		ND TYPE O		HSA	OF 2 SHEETS
Deer Cree					30302	1	_	ATION SH	OWN (TBM or MSL)	
2. LOCATION (C N 1 762 9				0,356.2380 For	rd Hts., IL	12. MANU		S DESIGNA	ATION OF DRILL	
3. DRILLING AG	ENCY						ich D-50			
Fox Drillin		drawing					L NO. OF OV SAMPLES T		DISTURBED	UNDISTURBED
title and file nu	imber)	GIZIII.		- 1	DCR-2		NUMBER C			2
5. NAME OF DE						<u> </u>				AB, 623.8-24 hr.
Don Eger						i			TARTED	COMPLETED
X VERTICA	ا ا] INCLIN	ED		DEG. FROM VERT.	16. DATE	.,	i_	3-30-99	3-30-99
7. THICKNESS	OF OVERB	URDEN			35'		TION TOP C		634	
8. DEPTH DRILL	LED INTO F	OCK			0		TURE OF IN			*
9. TOTAL DEPT	H OF HOLE				35.0				Brian M.	enichen.
ELEVATION	DEPTH	LEGE	ND	CLASSIFK	CATION OF MATERIALS (Description)	•	% CORE RECOV-	BOX OR SAMPLE	(Dritting tim	REMARKS se, water loss, depth
(ft) a	£ D	С			d		ERY 8	NO.	weathering), etc., if significant)
			,	6 in. topsoil						
633.4	1.0	12.574	<u>~</u>	Dealer and annua	ille elem near atitl (C	N N			5-6-7	
				Brown and gray s	silty clay - very stiff (C	,,,	12*	S-1	Qp = 2.75 tsf	
							'-			
									1	
630.9	3.5]	
				Brown and gray s WC=15.8%	and, trace silt and cl	ay (SM)			Torvane 1.5 tsf	
				10.5%			205	S-2		
							28*	5-2	1.	
628.4	6.0									
020.4	6.0				andy silt - stiff (ML)				4-5-6	
				WC=17.1%			15°	S-3	Qp = 1.5 tsf	
									4	
625.9	8.5			Brown silty sand	(SM)			13*	3-5-9	
				WC=21.2%	,,		16°	S-4 S-4A		
624.8	9.6			Gray silt (ML)				3"		
				3 in. wet at botton WC=20.1%	n]	
623.4	11.0		Ц						-	
				Gray silt - stiff - w WC=20.4%	et (ML)			1	Torvane 1.0 tsf Qp = 1.25 tsf	
							28*	S-5		
							20			
620.9	13.5								j	
0.000			П	Gray fine sandy s WC=18.2%	ilt - saturated (ML)				5-7-10	
				WC=18.2%			18*	S-6		
			П					ļ	4	
618.4	16.0		Н	Gray tine to medi	um sand, trace silt -			! [2-5-10	
				saturated (SP)			13*	S-7		
				WC=20.3%						
615.9	18.5								10745	
				Gray fine to medic saturated (SP)	um sand, trace silt -		4.55		3-7-12	
				WC=24.1%	3-8		15*	S-8		

							HOLE	NO.	CR-2
DRILL	NG L	OG □	VISION	INSTALLA	ATION			SHEET OF 2	2 SHEETS
1. PROJECT			JOB NUMBER		AND TYPE O		HSA		
Deer Cre			30302	1		ATION SHO	OWN (TBM or MSL)		
2. LOCATION (Coordinates	or Station)	90.356.2380 Ford Hts., IL	NGV		S DESIGNA	TION OF DRILL		
N 1,762.9		E 1,18	90,356.2380 FOID HIS., IL		rich D-50	S DESIGNA	TION OF DRILL		1.
Fox Drilling					L NO. OF OV	ER-	DISTURBED	UNDISTU	RBB
4. HOLE NO. (A		drawing		BURDEN	SAMPLES TA	KEN	: 15		2
title and file no			DCR-2	14. TOTAL	L NUMBER C	ORE BOXE	s	<u> </u>	
5. NAME OF DE				15. DEPT	H GROUND \	WATER 62	3.4 WD, 620.6 A	B 623 8-2	4 hr
Don Eget 6. DIRECTION			· · · · · · · · · · · · · · · · · · ·					OMPLETED	
X VERTICA] INCLINED	DEG. FROM VERT.	16. DATE	HOLE ATION TOP (3-30-99	3-30-	99
7. THICKNESS	OF OVERB	URDEN	35'				634.4	-	
8. DEPTH DRIL	LED INTO F	ROCK	0		L CORE REC				*
9. TOTAL DEPT	TH OF HOLE		35.0	19. 51010	NI UNE OF IN	SPECION	Brison Rei	ichen	1
ELEVATION	DEPTH		CLASSIFICATION OF MATERIALS	SIFICATION OF MATERIALS				IARKS	
(ft)	(ft) b	LEGEND	(Description)		RECOV- ERY	SAMPLE NO.	(Drilling time, weathering, e	water loss, der Ic., if significar g	oon nt) "
			Gray fine to medium sand, trace silt -	-					
613.4	21.0		saturated (SP) WC=24.1%						•
			Gray fine to medium sand, trace silt -				4-8-12		•
			saturated (SP) WC≈20.4%		14"	S-9			
									•
610.9	23.5						·		1
			Gray fine to medium sand, trace silt -				3-5-12		'
			saturated (SP)		18"	S-10			_
									7
			·]		1
608.4	26.0								
-			Gray fine to medium sand, trace silt, o	oarse			12-17-21		
			sand and gravel - saturated (SP) WC=15.5%		18*	S-11			
							1		7
605.9	28.5								1
			Gray silty fine to medium sand, occas	ionai	-	14*	22-24-27 Qp = 2.0 tsf		
	29.7		gravel (SM) WC=17.1%		18"	S-12 S-12A	Qp = 2.0 (S)		7
604.7	29./		Gray sandy clay, occasional broken lin	nestone		4*			- 1
			gravel - very stiff (CL)						
603.4	31.0		WC=18.0%						•
	21.7		Gray fine sand, trace silt (SP) WC=6.9%			8* S-13	19-27-22		
602.7	31.7		Gray silt with sand seams (ML)		18"	S-13A			
			WC=14.5%			10"			9
600.9	33.5								•
			Gray silt - stiff (ML)				10-15-13 Qp=1.75 tsf		-
						S-14			
599.4	35.0								•
			End of Boring Max. Dry Wt. = 112.1 pcf						
			Opt. WC = 15.0% (3-7 ft.)						
			Backfilled with bentonite chips.						1
			Qp = Hand Penetrometer						-
									٦
									_ 1
			3 - 9		. <u></u>				
								HQ16	

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							HOLE	NO. DCR		
DRILL	ING L	OG	VISION	INSTALL	ATION			SHEET 1		
1. PROJECT			JOB NUMBER	10. SIZE	AND TYPE O	FBIT	HSA	OF 1 SHEE		
Deer Cre			30302	11. DATU	M FOR ELEV	ATION SHO	OWN (TBM or MSL)			
2. LOCATION (NGV		o project	70.05-			
N 1,762,4	-	<u> </u>	39.505.5161 Ford Hts., IL	-4	rich D-50	S DESIGNA	TION OF DRILL			
Fox Drillin					L NO. OF OV	ER-	DISTURBED	UNDISTURBED		
4. HOLE NO. (A	s shown on	drawing		BURDEN	SAMPLES T	AKEN	8	0		
title and file nu			DCR-3	14. TOTA	L NUMBER C	ORE BOXE	s	- 		
5. NAME OF DE Don Eger				15. DEPT	H GROUND	WATER	626.8 WD, 62	RRAR		
6. DIRECTION		· · ·	7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7			ST		OMPLETED		
X VERTICA	W [] INCLINED	DEG. FROM VERT.	16. DATE	HOLE		3-30-99 i	3-30-99		
7. THICKNESS	OF OVERB	URDEN	20'	17. ELEV	ATION TOP C	OF HOLE	637.8			
B. DEPTH DRIL			0		L CORE REC					
9. TOTAL DEPT	 		20.0	19. SIGNATURE OF INSPECTOR Brian Friedle						
			CLASSIFICATION OF MATERIALS	<u> </u>	% CORE	BOX OR	REM	ARKS		
ELEVATION (ft)	DEPTH (ft) b	LEGEND c	(Description) d		RECOV- ERY 0	SAMPLE NO.	weathering, etc	ater loss, depth , if significant)		
			6 in. clayey topsoil							
636.8	1.0		Gray-brown silty clay, trace sand and	roots -		ļ <u>-</u> .	2-3-6			
			stiff (CL)	.0013 -	10"	S-1	Qp = 1.75 tsf			
							1			
604.6	0.5									
634.3	3.5		Gray brown silty clay, trace sand - stiff	f (CL)	<u> </u>		2-3-4			
			WC=18.8%, LL=34, PI=18		13*	S-2	Qp = 1.25 tsf			
631.8	6.0						İ			
631.8	6.0		Gray-brown silty fine sand (SM)				1-3-4			
			WC=21.7%		16"	S-3				
						<u> </u>				
629.3	8.5									
	J.,		Gray-prown clay, trace sand, seams o	f sandy			2-3-7			
			clay - stiff (CL) WC=21.5%		15*	S-4	Qp = 1.25 tsf			
626.8	11.0									
			Gray silty sand - saturated (SM)			_	3-2-9			
			WC=22.3%, LL=34, Pl=16		17"	S-5				
				:						
624.3	13.5									
			Gray silt, trace sand, seams of silty sa	ınd -		-	5-3-5			
			saturated (ML) WC=23.8%		18"	S-6				
621.8	16.0									
			Gray silty clay, seams of sand and silt			6 -	1-3-4 Qp = 0.5 tsf			
			medium (CL) WC=26.4%, LL=32, PI=15		15*	S-7	∠ µ = ∪.5 ISI			
619.3	18.5									
			Gray silty clay - medium (CL)				2-3-3 On = 0.5 tot			
647.6	20.0		WC=23.7%, LL=33, PI=16			S-8	Qp = 0.5 tsf			
617.8	20.0		End of Boring							
			Backfilled with bentonite chips.							
			Qp = Hand Penetrometer							
						ĺ				
		}								
			3-10							

1 ,

Deer Creek									HOLE	E NO.	DCR-
1. PROJECT 1.	DRILL	ING L	.OG º	VISION	INS	STALLAT	TON				•
DOCATION (Continuate of Station) N. 1762. (10.15.16.5 = E.1.189.963.8932 Ford His., IL. Diedrich D-50 N. 1762. (10.15.16.5 = E.1.189.963.8932 Ford His., IL. Diedrich D-50 Diedric	1. PROJECT										
N. 1,762, 101.5165 E. 189,963.8932 Ford His., IL. 12 MANUA COTURERS DESIGNATION OF DRIAL DISTURBED UNDSTEAM 15 17 17 17 18 18 18 18 19 19 19 19			or Station)	30302				ATION SHO	DAM (IRM OLWET)		
FOX DITIING 13. TOTAL NO. OF OVER DISTURBED UNDSTURED UN				9.963.8932 Ford Hts., IL				S DESIGNA	TION OF DRILL		
NOLE NO. As shown on grawing DCR-4											
18. MARE OF PRILER			drawing							UNDIST	ÜRI
S. MAIR OF ORILLES 15. DEPTH GROUND WATER 630.4 WD, 632.2 AB 15. DIRECTION OF NAME 15. DIRECTION OF NAME 15. DATE HOLE 329-99 329-99 329-99 15. DATE HOLE 329-99 329-99 17. ELEVATION TO OF HOLE 5349-99 329-99 17. ELEVATION TO OF HOLE 5349-99 329-99 17. ELEVATION TO OF HOLE 5349-99 329-99 17. ELEVATION TO OF HOLE 5349-99 329-99 18. SIGNATURE OF INSPECTOR JOHN TO OF HOLE 5349-99 18. SIGNATURE OF INSPECTOR JOHN TO OF HOLE 5	title and file no	umber)		DCR-4						!	
B. DIRECTION OF HOLE					 					620.0 AB	
Color Colo											
Thickness of oversunder 25	X VERTICA	v □] INCUNED	DEG. FROM	VERT.				3-29-99	3-29	
DEPTH DEPT	7. THICKNESS	OF OVERB	URDEN	25'	ļ					4	
Continue Continue	8. DEPTH DRIL	LED INTO I	ROCK	0							
ELEVATOR DEPTH EGEND Chestoristics Children was repetitive Children Childr	9. TOTAL DEP	TH OF HOL	Ę	25.0	19	SIGNAI	URE OF IN	SPECION.		in har	
636.4 1.0	(ft)	(ft)		(Description)	ERIALS		RECOV- ERY	SAMPLE	(Drilling time	, water loss, de	
636.4 1.0 Elack silly clay and topsoil - stiff (CL) 15" S-1 10" S-1A	<u> </u>									9	
Black silly clay and topsoil - stiff (CL) 15° S-1 10° S-	636.4	1.0									
Brown and gray stifty clay - very stiff (CL) 15 S-1				Black silty clay and topsoil - stift	f (CL)				Op = 1.5 tsf		
633.9 3.5 WC=23.6%, LL=54, Pl=32 5° Op = 2.5 tsl Gray and brown silty clay - siff (CL) 14° S-2 S-2 Gray and brown silty clay - very stiff (CL) 14° S-2 Op = 1.75 tsl WC=26.3%, LL=28, Pl=13 18° S-3 Gray silt clay, little silt - stiff (CL-SC) Op = 1.75 tsl Gray silt clay, little silt - stiff (CL-SC) Op = 1.75 tsl Gray silt clay, little silt - stiff (CL-SC) Op = 1.75 tsl Gray silt clay, little silt - stiff (CL-SC) Op = 1.75 tsl WC=20.7%, LL=31, Pl=31 20° S-4 Gray silt clay in trace gravel and silt (SW) 12° S-5 Silt, trace sand and clay (ML) S-5 S-5A WC=19.4% Silt, little silt - stiff (CL-SC) S-5-6 Gray silt - wet (ML) WC=24.7%, LL=39, Pl=18 12° S-6 Gray silt - wet (ML) WC=20.2% 18° S-7 Clayey silt - gray - medium - wet (ML) WC=21.2% 17° S-8 Clayey silt - gray - medium - wet (ML) WC=21.2% 17° S-8 Clayey silt - gray - medium - wet (ML) WC=21.2% 17° S-8 Clayey silt - gray - medium - wet (ML) WC=21.2% 17° S-8 Clayey silt - gray - medium - wet (ML) WC=21.2% 17° S-8 Clayey silt - gray - medium - wet (ML) WC=21.2% 17° S-8 Gray silt - gray - medium - wet (ML) WC=21.2% 17° S-8 Clayey silt - gray - medium - wet (ML) WC=21.2% 17° S-8 Clayey silt - gray - medium - wet (ML) WC=21.2% 17° S-8 Clayey silt - gray - medium - wet (ML) WC=21.2% 17° S-8 Clayey silt - gray - medium - wet (ML) WC=21.2% 17° S-8 Clayey silt - gray - medium - wet (ML) WC=21.2% 17° S-8 Clayey silt - gray - medium - wet (ML) WC=21.2% 17° S-8 17° 17° 17° 18°	635.6	1.8		Brown and gray silty clay - very	stiff (CL)		15°				
Gray and brown silty clay - stiff (CL) Gray and brown silty clay - very stiff (CL) WC=28.3%, LL=28, Pl=13 Dry W1,=98.7 pcf, C=0.7 tsf Gray silty clay, little silt - stiff (CL-SC) WC=20.7%, LL=31, Pl=31 20° S-4 Gray silty clay, little silt - stiff (CL-SC) WC=20.7%, LL=31, Pl=31 20° S-4 11.0 Sand, trace gravel and silt (SW) WC=18.0% Silt, trace sand and clay (ML) WC=19.4% Gray silt - year (ML) WC=24.7%, LL=39, Pl=18 12° S-6 Gray silt - welt (ML) WC=20.2% 18.5 Gray silt - welt (ML) WC=20.2% 18.5 Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2%				WC=23.6%, LL=54, PI=32	J (OL)	1			Op = 2.5 tsf		
Gray and brown silty clay - stiff (CL) Gray and brown silty clay - very stiff (CL) WC=28.3%, LL=28, Pl=13 Dry W1,=98.7 pcf, C=0.7 tsf Gray silty clay, little silt - stiff (CL-SC) WC=20.7%, LL=31, Pl=31 20° S-4 Gray silty clay, little silt - stiff (CL-SC) WC=20.7%, LL=31, Pl=31 20° S-4 11.0 Sand, trace gravel and silt (SW) WC=18.0% Silt, trace sand and clay (ML) WC=19.4% Gray silt - year (ML) WC=24.7%, LL=39, Pl=18 12° S-6 Gray silt - welt (ML) WC=20.2% 18.5 Gray silt - welt (ML) WC=20.2% 18.5 Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2%						- 1					
631.4 6.0 Gray and brown silty clay - very stiff (CL) WC=26.3%, LL=28, Pl=13 Dry W1.=98.7 pcf. C=0.7 tsf	633.9	3.5		Gray and brown silty clay - stiff	(CL)				246		
Gray and brown silty clay - very stiff (CL) WC=26.3%, LL=28, Pl=13 Dry WI, =98.7 pcf, C=0.7 tsf Gray silty clay, little silt - stiff (CL-SC) WC=20.7%, LL=31, Pl=31 20° S-4 11.0 Sand, trace gravel and silt (SW) WC=18.0% Silt, trace sand and clay (ML) WC=19.4% 623.9 13.5 Silt, trace sand and clay (ML) WC=19.4% 621.4 16.0 Gray silt - wet (ML) WC=20.2% 18° S-5 618.9 18.5 Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2% Clavey silt - gray - medium - wet (ML) WC=21.2%				Gray and brown sity clay - still	(CL)	[14*	S -2			
Gray and brown sitty clay - very stiff (CL) WC=26.3%, LL=28, Pl=13 Dry Wt.=98.7 pcf, C=0.7 tsf Gray and brown sitty clay - very stiff (CL) WC=20.7 tsf Gray stift clay - little silt - stiff (CL-SC) WC=20.7%, LL=31, Pl=31 20° S-4 Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf 12° Sand. trace gravel and silt (SW) WC=18.0% Silt. trace sand and clay (ML) WC=19.4% Silt. trace sand and clay (ML) WC=24.7%, LL=39, Pl=18 12° S-6 Gray silt - wet (ML) WC=20.2% 18* S-7 Clavey silt - gray - medium - wet (ML) WC=21.2% Torvane 2.5 tsf Op = 4.5+ tsf Torvane 2.5 tsf Op = 4.5- tsf Torvane 2.5 tsf Op = 4.5- tsf Torvane 2.5 tsf Op = 4.5- tsf Torvane 2.5 tsf Op = 4.5- tsf Torvane 2.5 tsf Op = 4.5- tsf Torvane 2.5 tsf Op = 4.5- tsf Torvane 2.5 tsf Op = 1.75 tsf Torvane 2.5 tsf Op = 1.75 tsf Torvane 2.5 tsf Op = 1.75 tsf Torvane 2.5 tsf Op = 1.75 tsf Torvane 2.5 tsf Op = 1.75 tsf Torvane 2.5 tsf Op = 1.75 tsf Torvane 2.5 tsf Op = 1.75 tsf					,		14	3-2			
Gray and brown sitty clay - very stiff (CL) WC=26.3%, LL=28, Pl=13 Dry Wt.=98.7 pcf, C=0.7 tsf Gray and brown sitty clay - very stiff (CL) WC=20.7 tsf Gray stift clay - little silt - stiff (CL-SC) WC=20.7%, LL=31, Pl=31 20° S-4 Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf 12° Sand. trace gravel and silt (SW) WC=18.0% Silt. trace sand and clay (ML) WC=19.4% Silt. trace sand and clay (ML) WC=24.7%, LL=39, Pl=18 12° S-6 Gray silt - wet (ML) WC=20.2% 18* S-7 Clavey silt - gray - medium - wet (ML) WC=21.2% Torvane 2.5 tsf Op = 4.5+ tsf Torvane 2.5 tsf Op = 4.5- tsf Torvane 2.5 tsf Op = 4.5- tsf Torvane 2.5 tsf Op = 4.5- tsf Torvane 2.5 tsf Op = 4.5- tsf Torvane 2.5 tsf Op = 4.5- tsf Torvane 2.5 tsf Op = 4.5- tsf Torvane 2.5 tsf Op = 1.75 tsf Torvane 2.5 tsf Op = 1.75 tsf Torvane 2.5 tsf Op = 1.75 tsf Torvane 2.5 tsf Op = 1.75 tsf Torvane 2.5 tsf Op = 1.75 tsf Torvane 2.5 tsf Op = 1.75 tsf Torvane 2.5 tsf Op = 1.75 tsf						F					
Gray and brown sitty clay - very stiff (CL) WC=26.3%, LL=28, Pl=13 Dry Wt.=98.7 pcf, C=0.7 tsf Gray and brown sitty clay - very stiff (CL) WC=20.7 tsf Gray stift clay - little silt - stiff (CL-SC) WC=20.7%, LL=31, Pl=31 20° S-4 Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf 12° Sand. trace gravel and silt (SW) WC=18.0% Silt. trace sand and clay (ML) WC=19.4% Silt. trace sand and clay (ML) WC=24.7%, LL=39, Pl=18 12° S-6 Gray silt - wet (ML) WC=20.2% 18* S-7 Clavey silt - gray - medium - wet (ML) WC=21.2% Torvane 2.5 tsf Op = 4.5+ tsf Torvane 2.5 tsf Op = 4.5- tsf Torvane 2.5 tsf Op = 4.5- tsf Torvane 2.5 tsf Op = 4.5- tsf Torvane 2.5 tsf Op = 4.5- tsf Torvane 2.5 tsf Op = 4.5- tsf Torvane 2.5 tsf Op = 4.5- tsf Torvane 2.5 tsf Op = 1.75 tsf Torvane 2.5 tsf Op = 1.75 tsf Torvane 2.5 tsf Op = 1.75 tsf Torvane 2.5 tsf Op = 1.75 tsf Torvane 2.5 tsf Op = 1.75 tsf Torvane 2.5 tsf Op = 1.75 tsf Torvane 2.5 tsf Op = 1.75 tsf	631.4	6.0									
Dry Wt.=98.7 pcf, C=0.7 tsf 18" S-3		-			stiff (CL)						
Gray silt clay, little silt - stiff (CL-SC) WC=20.7%, LL=31, Pl=31 20° S-4 Torvane 2.5 tsf Qp = 1.75 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Torvane							18*	S-3	Qp = 2.25 tst		
Gray silt clay, little silt - stiff (CL-SC) WC=20.7%, LL=31, Pl=31 20° S-4 Torvane 2.5 tsf Qp = 1.75 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Torvane 2.5 tsf Qp = 1.75 tsf Torvane 2.5 tsf Torvane						-					
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WC=20.7%, LL=31, Pl=31 20° S-4 Qp = 1.75 tsf 20° S-4 Qp = 1.75 tsf Qp = 1.75 tsf Qp = 1.75 tsf Qp = 1.75 tsf Qp = 1.75 tsf Qp = 1.75 tsf Qp = 1.75 tsf Qp = 1.75 tsf 1-2-4 Sitt, trace sand and clay (ML) WC=19.4% Silty clay - hard (CL) WC=24.7%, LL=39, Pl=18 12° S-6 Qp = 1.75 tsf 1-2-4 S-5-5 S-5A 6° 7-11-18 Qp = 4.5+ tsf 621.4 16.0 Gray sill - wet (ML) WC=20.2% 18° S-7 Clavey sill - gray - medium - wet (ML) WC=21.2% Clavey sill - gray - medium - wet (ML) WC=21.2% 17' S-8 Qp = 1.75 tsf	628.9	8.5		Grav silty clay, little silt - stiff (C	L-SC)				Torvana 2.5 tst		
626.4 11.0 Sand, trace gravel and silt (SW) WC=18.0% 18* S-5 S-5A 623.9 13.5 Silt, trace sand and clay (ML) WC=19.4% 12* S-6 Silty clay - hard (CL) WC=24.7%, LL=39, Pl=18 12* S-6 Gray silt - wet (ML) WC=20.2% 18* S-7 Clavey silt - gray - medium - wet (ML) WC=21.2% 5-5-6 Clavey silt - gray - medium - wet (ML) WC=21.2% 5-8 Qp = 0.5 tsf					,	:					
Sand, trace gravel and silt (SW) WC=18.0% Silt, trace sand and clay (ML) WC=19.4% Silty clay - hard (CL) WC=24.7%, LL=39, Pl=18 12* S-6 7-11-18 Op = 4.5+ tsf Gray silt - wet (ML) WC=20.2% 18* S-5 S-5A 6* 7-11-18 Op = 4.5+ tsf Clavey silt - gray - medium - wet (ML) WC=21.2% 17* S-8							2 0 °	S-4			
Sand, trace gravel and silt (SW) WC=18.0% Silt, trace sand and clay (ML) WC=19.4% Silty clay - hard (CL) WC=24.7%, LL=39, Pl=18 12* S-6 7-11-18 Op = 4.5+ tsf Gray silt - wet (ML) WC=20.2% 18* S-5 S-5A 6* 7-11-18 Op = 4.5+ tsf Clavey silt - gray - medium - wet (ML) WC=21.2% 17* S-8											
625.4 12.0 WC=18.0% Silt. trace sand and clay (ML) Silt. trace sand and clay (ML) WC=19.4% Silty clay - hard (CL) WC=24.7%, LL=39, Pl=18 12* S-6 S-5 Gray silt - wet (ML) WC=20.2% 18* S-7 S-5-6 Clayey silt - gray - medium - wet (ML) WC=21.2% 17* S-8 Clayey silt - gray - medium - wet (ML) WC=21.2% 17* S-8 Clayey silt - gray - medium - wet (ML) Clayey silt - gray - medium - wet (ML) WC=21.2% 17* S-8 Clayey silt - gray - medium - wet (ML) WC=21.2% T7* S-8 Clayey silt - gray - medium - wet (ML) T7* Clayey silt - gray - medium - wet (ML) T7* Clayey silt - gray - medium - wet (ML) T7* Clayey silt - gray - medium - wet (ML) T7* Clayey	626.4	11.0									
Silt, trace sand and clay (ML) WC=19.4% Silty clay - nard (CL) WC=24.7%, LL=39, Pl=18 12" S-6 7-11-18 Op = 4.5+ tsf Gray silt - wet (ML) WC=20.2% 18" S-5-6 Clayey silt - gray - medium - wet (ML) WC=21.2% 17" S-8 Clayey silt - gray - medium - wet (ML) WC=21.2% 17" S-8					l	İ	1		1-2-4		
623.9 13.5 WC=19.4% Silty clay - hard (CL) WC=24.7%, LL=39, Pl=18 12° S-6 Qp = 4.5+ tsf 621.4 16.0 Gray silt - wet (ML) WC=20.2% 18° S-7 618.9 18.5 Clavey silt - gray - medium - wet (ML) WC=21.2% 17° S-8 Qp = 0.5 tsf	625.4	12.0					18*	S-5A			
Silty clay - hard (CL) WC=24.7%, LL=39, Pl=18 12* S-6 7-11-18 Qp = 4.5+ tsf 621.4 16.0 Gray silt - wet (ML) WC=20.2% 18* S-7 Clayey silt - gray - medium - wet (ML) WC=21.2% 17* S-8 2-3-5 Qp = 0.5 tsf	İ					-		6*			
Silty clay - hard (CL) WC=24.7%, LL=39, Pl=18 12* S-6 7-11-18 Qp = 4.5+ tsf 621.4 16.0 Gray silt - wet (ML) WC=20.2% 18* S-7 Clayey silt - gray - medium - wet (ML) WC=21.2% 17* S-8 2-3-5 Qp = 0.5 tsf	500.5										
621.4 16.0 Gray sitt - wet (ML) WC=20.2% 18* S-6 Clavey sitt - gray - medium - wet (ML) WC=21.2% 2-3-5 Qp = 0.5 tsf	623.9	13.5		Silty clay - hard (CL)		-			7-11-18		
Gray silt - wet (ML) WC=20.2% 18" S-7 5-5-6 Clavey silt - gray - medium - wet (ML) WC=21.2% 17" S-8 2-3-5 Qp = 0.5 lsf							12*	S-6	Qp = 4.5 + tst		
Gray silt - wet (ML) WC=20.2% 18" S-7 5-5-6 Clavey silt - gray - medium - wet (ML) WC=21.2% 17" S-8 2-3-5 Qp = 0.5 lsf						!					
Gray silt - wet (ML) WC=20.2% 18" S-7 5-5-6 Clavey silt - gray - medium - wet (ML) WC=21.2% 17" S-8 2-3-5 Qp = 0.5 lsf											
Gray silt - wet (ML) WC=20.2% 18" S-7 5-5-6 Clayey silt - gray - medium - wet (ML) WC=21.2% 17" S-8 2-3-5 Qp = 0.5 lsf	621.4	16.0									
618.9 18.5 Clavey silt - gray - medium - wet (ML) WC=21.2% 2-3-5 Qp = 0.5 tsf						į			5-5-6		
Clayey silt - gray - medium - wet (ML) WC=21.2% 17° S-8 2-3-5 Qp = 0.5 tsf						!	18*	S-7			
Clayey silt - gray - medium - wet (ML) WC=21.2% 17° S-8 2-3-5 Qp = 0.5 tsf											
Clayey silt - gray - medium - wet (ML) WC=21.2% 17° S-8 2-3-5 Qp = 0.5 tsf											
WC=21.2% Qp = 0.5 tsf	618.9	18.5	!!!!	Clavey silt - oray - madium - wat	(ML)				2-3-5		
1 11:11		1			,,	:	17*	S-8			
617.4 20.0	617.4	20.0		3	-11			3 -			

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·								HOLE	NO. DCR-4	
DRILL	ING L	OG	DIVISION		INSTALLA	TION			SHEET 2 OF 2 SHEETS	
1. PROJECT				JOB NUMBER	10. SIZE A	ND TYPE O	F BIT	HSA	TOT E STEETS	
Deer Cre	ek						OWN (TBM or MSL)			
2. LOCATION (Coordinates	s or Station)	30302	NGVI				•	
N 1.762.1	101.5165	5 E 1,1	89.963.8932 For	d Hts., IL			S DESIGNA	TION OF DRILL		
3. DRILLING AC						ich D-50				
Fox Drillin					13. TOTAL	NO. OF OV	ER-	DISTURBED	UNDISTURBED	
4. HOLE NO. (A		drawing			BURDEN	SAMPLES TA	KEN	1 11 .	j 1	
title and file nu				DCR-4	14. TOTAL	NUMBER C	ORE BOXE	s		
5. NAME OF DE										
Don Eger					15. DEP 11	GROUND V		630.4 WD, 6		
6. DIRECTION		_			16. DATE	HOLE	STA		OMPLETED 00	
X VERTICA	AL [INCLINE	D	DEG. FROM VERT.			<u> </u>	3-29-99 3-29-99		
7. THICKNESS	OF OVERB	URDEN		25'	17. ELEVA	TION TOP C	P HOLE	637.4	······	
				0	18. TOTAL	CORE REC	OVERY FO	R BORING	*	
8. DEPTH DRIL					19. SIGNA	TURE OF IN	SPECTOR .	<i>X</i> ' ' '	. 1	
9. TOTAL DEPT	TH OF HOL	E		25.0	L		1 000 05	Drum Ken	ch-	
ELEVATION	DEPTH	LEGENE	CLASSIFIC	CATION OF MATERIALS	i	% CORE RECOV-	BOX OR		ARKS vater loss, depth	
(ft)	(ft)	1		(Description) d		ERY	NO.	weathering, e	c., if significant)	
a	Ь_	 	Clavey sitt - com	- medium - wet (ML)		е	- '		9	
			WC=21.2%	ouium - wet (MIL)						
616.4	21.0									
			Gray silty sand (S	M)				Weight of rod		
]		1:4:4	WC=24.8%			9*	S-9		•	
614.9	22.5									
014.9	22.5		Gray silty sand (S	M)	···			*	•	
			WC=20.4%	,						
1			A					Mainha of and		
								Weight of rod		
1			A			15*	S-10		_	
612.4	25.0									
"	1		End of Boring	******						
			Backfilled with be						•	
			Qp = Hand Penet	rometer						
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				3-12						

									<u>.E NO.</u>		<u> </u>
DRILL	ING L	OG	DIVISION		INSTALLATION SHEET OF 2					:T	1 HEET
1. PROJECT				JOB NUMBER				HSA		2 5	HEE
Deer Cre		Casi-		30302	_1		ATION SH	OWN (TBM or MSL)			
2. LOCATION (N 1,762.2			n) 190,816.3943 Foi	rd Hts., IL	NGV		S DESIGNA	ATION OF DRILL	7		
3. DRILLING AC	GENCY				Died	rich D-50					
Fox Drillin		drawing		M	→	N. NO. OF OV		DISTURBED	UNDIS	TURE	
title and file nu	umber)		!	DCR-5	———	L NUMBER C		<u> 12</u>		0	
5. NAME OF DE								22.7 WD, 623.7	AD COE O	24 5	
6. DIRECTION								TARTED	COMPLETE		۲.
X VERTICA	AL [INCLINE	D	DEG. FROM VERT				3-29-99	3-2	9-99	
7. THICKNESS	OF OVERB	URDEN		25'		ATION TOP (633	3.7		
8. DEPTH DRIL	LED INTO	ROCK		0	1	ATURE OF IN					•
9. TOTAL DEPT	TH OF HOL	E		25.0	13. 51614			Brin Ke	mile		
ELEVATION (ft)	DEPTH (ft)	LEGEN		CATION OF MATERIAL (Description)	S	% CORE RECOV-	BOX OR SAMPLE	(Drilling tin	REMARKS No, water loss, o		
(it)	b	c		<u>d</u>		ERY	NO.	weatherin	g, etc, if signific 9	cant)	
		2. V.	.1 / - / /	lack							·
632.7 632.4	1.0 1.3	7 7 4 7	· .1	lack - vone ciiff		<u> </u>		107.00			
032.4	1.3		Ciayey lopson - D	ilty clay, trace roots	and	1	3* S-1	3-7-10 Qp = 2.25 tsf			
			topsoil - very stiff WC=23.0%, LL=5	(CL)		13"	S-1A				
			#10223.0%, LL=5	io, F1=33			10*	Qp = 2.5 tsf			
630.2	3.5			·							
030.2	3.5			ilty clay, trace roots	and			2-4-4			
			topsoil - very stiff	topsoil - very stiff (CL)			S-2	Qp = 2.25 tsf			
627.7	6.0		4					1			٠,
			WC=24.6%	yey silt - very stiff		409		2-4-7 Qp = 2.0 tsf			-
					• .	16"	S-3				
								-			
625.2	8.5										
				yey sand with seam	s of silt			3-6-17			
			and clay - moist (\$ WC=14.7%, LL=2			15*	S-4				
								-			
			3								
622.7	11.0		Brownish gray silt	little sand, occasio	nai sand			4-6-5			
			seams - very stiff			18*	S-5	Qp = 2.5 tsf			
			WC=21.1%			"	3-3				
								1			
620.2	13.5			* * * * * * * * * * * * * * * * * * * *							
619.9	13.8		Silty gray sand - se	aturated (SM)(4*)	. 1			3-6-5 Qp = 2.75 tsf			
			Gray silt - very stift	(ML)		16"	S -6	2			
			WC=15.7%								
617.7	16.0		Gray silt - very stiff	- saturated (ML)				5-8-8			
			WC=18.0%	(···· -)		18*	S-7	Qp = 3.0 tsf			
616.2	17.5										
570.2			Gray silt - very stiff	- saturated (ML)							
								3-4-8 Qp = 3.0 tsf			,
				3-13		18*	S-8	ap = 0.0 tol			
613.7 ENG FORM	20.0	PREVIO	JS EDITIONS ARE OBS			PROJECT		<u> </u>	[HO	ËNO	gall/9
ENG FORM	1836		IN GCA 1/94)	OLE IE.		Deer Cre	ek	,	ďα	E NO.	

1							HOLF	NO. DO)B-5
DRILLING	LOG	DIVISION		INSTALL	ATION			SHEET	2 SHEETS
1. PROJECT			JOB NUMBER		AND TYPE O		HSA		
Deer Creek	alee or Carri	001	30302	11. DATU NGV		ATION SHO	OWN (TBM or MSL)		-
2. LOCATION (Coordin N 1,762,268.71		on) ,190.816.3943 Fc	ord Hts., IL			S DESIGNA	TION OF DRILL		
B. DRILLING AGENCY				Diedr	rich D-50				
Fox Drilling I. HOLE NO. (As shown				4	L NO. OF OV		DISTURBED	UNDISTURBE	D
title and file number)	n on drawing	:	DCR-5				12	0	
. NAME OF DRILLER					L NUMBER C				
Don Eger S. DIRECTION OF HOL	E			15. DEPT	H GROUND		22.7 WD, 623.7 AI		ır.
X VERTICAL	INCLIN	ED	DEG. FROM VERT.	16. DATE			3-29-99	3-29-99	
7. THICKNESS OF OVE	RBURDEN		25'		ATION TOP C		633.7		
. DEPTH DRILLED INT	O ROCK		0		CORE REC				*
. TOTAL DEPTH OF H	OLE		25.0		19. SIGNATURE OF INSPECTOR Brun Pains			ich_	
ELEVATION DEPT	LEGER		CATION OF MATERIALS (Description)	i	% CORE RECOV- ERY	BOX OR SAMPLE NO.	(Driffing time,)	IARKS veter loss, depth ic., if significant)	
a b	11	Gray silt - very si	iff - saturated (ML)					9	
612.7 21.0_			,						•
612.721.0_		Gray silt, trace fil (ML) WC=23.9%	ne sand - stiff - satura	ited	18*	S-9	3-5-10 Qp = 1.0 tsf		4
610.2 23.5_		Gray sand, trace	silt (SW)				2-4-7		
		WC=13.8%	J. (211)		18*	S-10			
608.7 25.0_		End of Boring							
		Backfilled with be Qp = Hand Pene							٦
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			3-14						۳

								HOLE	NO.	DCI	R-6
DRILL	NG L	OG	VISION		INSTALLA	ATION			SHEE		1 EETS
1. PROJECT	-1-			30302		NO TYPE OF		HSA OWN (TBM or MSL)			
Deer Cre		or Station)		30302	NGV		ATION SH	OWN (TEM OF MSL)			
			9,015.6386 Ford	Hts., IL			S DESIGNA	TION OF DRILL			
3. DRILLING AC						ich D-50					
Fox Drillin		drawing				L NO. OF OV S AMPLES TA		DISTURBED	UNDIST	TURBI	
title and file nu			; D	CR-6		L NUMBER C			<u></u>		
5. NAME OF DE Don Eger								21.6 WD, 627.1 A	B 631 6	24 hr	
6. DIRECTION									COMPLETE		•
X VERTICA	L	INCLINED		DEG. FROM VERT.	16. DATE			3-30-99		0-99	
7. THICKNESS	OF OVERB	URDEN	1	8.54'	17. ELEVATION TOP OF HOLE 639.6						
8. DEPTH DRIL	LED INTO F	ROCK		0	18. TOTAL CORE RECOVERY FOR BORING 19. SIGNATURE OF INSPECTOR						%
9. TOTAL DEPT	TH OF HOLE	E		18.5	19. SIGIO	TORE OF IN	SPECION /	Brum Tois	inher		
ELEVATION (ft)	(ft) (ft) (Description) a b c d						BOX OR SAMPLE NO.	REI (Drilling time, weathering, e			
<u> </u>		34 34 1	12 in. topsoil			e			<u>y</u>		
638.6	1.0	1, 34, 37,		av eilte eine ten-	rocte			1-4-6			
			very stiff (CL)	ay siity clay, trace	roots •	15"	S-1	Qp = 2.0 tsf			
							i				
636.1	3.5		Brownish gray silty s					Torvane 2.0 tsf			
			Missing bottom 3 in. WC=16.2%, LL=19, Qu=0.61 tsf, Cc=0.1	PI=6	24° S-2						,
633.6	6.0		Dry Wt.=112.4 pcf Brownish gray silty s	and - soft (SM)				1-2-2			
						15*	S-3	Qp = 0.25			, y
631.1	8.5		Gray silty clay, trace WC=14.7%, LL=24,		CL)	16*	S-4	2-5-6 Qp = 2.25 tst			
628.6	11.0							·			
026.0	71.0		Gray silty clay, trace WC=20.1%	sand - hard (CL)		10°	S-5	3-8-11 Qp = 4.25 tsf			
626.1	13.5										
020.1	.5.5		Gray silty clay - hard WC=23.2%, LL=37,					Torvane 4.5 tsf Qp - 4.0 tsf			
			Qu=1.74 tsf, Dry Wt			28*	S-6				
623.6	16.0		Gray silty clay - very	stiff (CL)				4-6 -7			
			LL=24, Pl=6	(32)		14*	S-7	Op = 3.0 tsf			
621.6	18.0										
621.1	18.5		Driller notes fracture	d rock beginning	at 18 ft.	5•	0.0	50/0.5*			
			End of Boring Backfilled with bento Max Dry Wt.=124.9 Opt WC=9.8% (4-8 f Qp = Hand Penetron	ocf t.)				50/0.5			
				3-15	5						
		!				500 1507		<u> </u>			

HOLE NO DCR-7

								INO. DUN	-
DRILL	ING L	OG O	VISION	INSTALL	ATION			SHEET 1	
1. PROJECT			JOB NUMBER	10. SIZE	AND TYPE O	F BIT	HSA	OF 2 SHEE	: 1
Deer Cre	ek		30302				OWN (TBM or MSL)		_
2. LOCATION (or Station)		NGV					
			9.939.9775 Ford Hts., IL			S DESIGNA	TION OF DRILL		-
3. DRILLING AC			<u> </u>	4	ich D-50		-		
Fox Drillin					L NO. OF OV	ÆR-	DISTURBED	UNDISTURBED	_
4. HOLE NO. (A		drawing		BURDEN	SAMPLES T	AKEN	1 11	1 0	
title and file nu	ımber)		DCR-7	14 TOTA	L NUMBER C	OBE BOYE			
5. NAME OF DE	RILLER								
Don Eger				15. DEPT	H GROUND	WATER 62	21.2 WD, 627.2 A	B, 633.1-24 hr.	
6. DIRECTION	OF HOLE			16. DATE	HOLE	ST		COMPLETED	
X VERTICA	™ □] INCLINED	DEG. FROM VERT.			<u>_</u>	3-29-99	3-29-99	
7. THICKNESS	OF OVERB	URDEN	25'	17. ELEV	ATION TOP C	OF HOLE	636.2		
8. DEPTH DRIL			0	18. TOTA	CORE REC	OVERY FO	R BORING		,
				19. SIGNA	TURE OF IN	SPECTOR		//	_
9. TOTAL DEPT	H OF HOL	-	25.0	<u></u>	W CORE	I BOY OF	Dirson / Bushen		
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	j .	% CORE RECOV-	BOX OR SAMPLE			
(ft)	(ft)		(Description)		ERY	NO.	weathering,	tic., if significant)	
a	ь	2 6 2 16 2			e .			9	
		l	TOPSON						
635.2	1.0	1. 2.4 1.1		<u> </u>					
			Brown-gray silty clay, trace topsoil - ve	ery stiff			4-5-8		
			(CL)		10"	S-1	Qp = 2.25 tsf		
							1		
632.7	3.5								
			Brown and gray silty clay - very stiff (C WC=28.4%, LL=52, PI=31	iL)			3-4-6 00 = 2.0 tet		
			VVC=20.4%, LL=52, PI=31		8*	S-2	Op = 2.0 tsf		
631.2	5.0								
031.2	3.0		Gray silty clay, trace gravel, shells and	<u> </u>			1		
			organic - stiff (CL)				'		
							2-3-4		
							2-3-4 Qp = 1.0 tsf		
					14*	S-3			
607.7	0.5								
627.7	8.5		Gray silty clay - very stiff (CL)				2-6-9		
			WC=19%, LL=33, PI=17		4.00		Op = 2.0 tsf		
					12*	S-4			
625.2	11.0								
625.2	11.4	<i>munic</i>	Gray clayey silt (ML)			5*	3-6-11		
024.0	· · · · -		\WC=17.7%		148	S-5A	*		
			Gray silt - wet (ML)		14"	S-5B			
						9*			
£22.7	13.5								
622.7	13.5	- 	Gray silt, trace sand (ML)				1-5-9	-	
			WC=20.8%		4 77	0.0			
					17*	S-6			
621.2	15.0								
			Gray clayey silt (ML)						
			WC=22.6%						
							5-7-9		
					18*	S-7			
	40.5								
617.7	18.5		Gray silt (ML)				5-6-7		
			Gray Silt (WE)						
			3		15"	S- 8			
616.2	20.0		3-16						

HOLE NO. DCR-7 DIVISION INSTALLATION SHEET **DRILLING LOG** OF 2 SHEETS 1. PROJECT JOB NUMBER 10. SIZE AND TYPE OF BIT HSA 11. DATUM FOR ELEVATION SHOWN (TBM or MSL) Deer Creek 30302 2. LOCATION (Coordinates or Station) N 1,761,113.5420 E 1,189.939.9775 Ford Hts., IL 12. MANUFACTURER'S DESIGNATION OF DRILL 3. DRILLING AGENCY Diedrich D-50 Fox Drilling 13. TOTAL NO. OF OVER-DISTURBED UNDISTURBED 4. HOLE NO. (As shown on drawing **BURDEN SAMPLES TAKEN** 0 DCR-7 title and file number) 14. TOTAL NUMBER CORE BOXES 5. NAME OF DRILLER 15. DEPTH GROUND WATER 621.2 WD, 627.2 AB, 633.1-24 hr. Don Eger 6. DIRECTION OF HOLE STARTED COMPLETED 16. DATE HOLE 3-29-99 INCLINED DEG. FROM VERT. 3-29-99 X VERTICAL 17. ELEVATION TOP OF HOLE 636.2 25' 7. THICKNESS OF OVERBURDEN 18. TOTAL CORE RECOVERY FOR BORING % 8. DEPTH DRILLED INTO ROCK 0 19. SIGNATURE OF INSPECTOR 9. TOTAL DEPTH OF HOLE 25.0 % CORE CLASSIFICATION OF MATERIALS **BOX OR** REMARKS **ELEVATION** DEPTH RECOV-SAMPLE LEGEND (Drilling time, water loss, depth (Description) (ft) (ft) ERY NO. weathering, etc., if significant) b đ Gray silt (ML) 615.2 21.0 Gray silty sand - saturated (SM) Weight of rod WC=25% 12" S-9 0% gravel, 52.7% sand, 47.3% fines 612.7 23.5 Gray sand, trace gravel and silt - saturated Weight of rod (SW) 18* S-10 WC=22.0% 25.0 611.2 **End of Boring** Backfilled with bentonite chips. Qp = Hand Penetrometer 3-17

HOLE NO.